Caltrans Maintenance Storm Water Pollution Prevention Bulletin

Vol. 6, Issue 1 • January 2003

Soil Stabilization at Maintenance Facilities

Exposed soil areas at Maintenance Facilities are frequently an overlooked source for potential offsite pollutant discharges. When rainfall occurs, the subsequent flow of storm water through unstabilized soil areas can pick up one of the most common pollutants on a Maintenance Facility …sediment. Stabilizing exposed soil areas using approved Best Management Practices (BMPs) can prevent soil erosion and subsequent offsite discharge.

This bulletin reviews BMPs that can be implemented to minimize sediment disturbance and discharge into storm drains or water bodies.

Unstabilized soil area with potential to erode and discharge sediment off site.

EVALUATE THE EXPOSED SOIL AREA…

1) Is the area deficient of vegetation or other conditions or practices to hold the soil in place?
2) Is the area subject to run-on, either sheet flow or concentrated flow?
3) Does the area have significant slopes which will increase the probability of erosion?
4) Is the area being used for equipment storage?
5) Do vehicles or equipment regularly utilize these areas?
6) Is the area intermittently used for storage of materials or waste?
7) Does the area show signs of erosion?

If Yes to any or a combination of these questions, then…

THE DO'S

- Maintain existing vegetation and enhance where possible.

Maintaining vegetation as groundcover reduces erosion and can provide pollutant filtering benefits.

- Prevent run on from adjoining areas that can cause erosion using either ditches, berms, dikes, or swales (per Section 2.5.2 of the Storm Water Quality Practice Guidelines [SWQPG]), sandbag or gravel bag barriers (per BMP Section 2.4.2 of the SWQPG), or fiber rolls (Section 2.4.4 of the SWQPG).
- Protect slopes, flat areas, exposed soil areas, or transportation corridors with gravel or pavement, if possible, otherwise use applicable BMPs that best fit the facilities needs, per Section 2.6–Soil Stabilization:
  - Wood Mulch (Section 2.6.1 of the SWQPG)
  - Hydraulic Mulch (Section 2.6.2 of the SWQPG)
  - Hydroseeding/Handseeding (Section 2.6.3 of the SWQPG)
  - Straw Mulch (Section 2.6.4 of the SWQPG)
  - Compaction (Section 2.6.5 of the SWQPG)
- Ensure irrigation systems are in proper working order and not over watering or overspraying areas.
- Inspect unpaved/disturbed soil areas regularly to assure that erosion and offsite sediment discharge is not occurring.
- Minimize use of chemicals to eradicate vegetation from exposed areas.
- Prevent storage of hazardous materials on exposed soil areas.

Well-maintained mulch provides cost-effective erosion control benefits.

Caltrans Maintenance MSW Storm Water

Additional information is available in the Caltrans Maintenance Manual, Chapter C-6, or from your District Maintenance Storm Water Coordinator. Questions or comments may be directed to Greg Lockshaw, HQ Storm Water Coordinator, gregory_lockshaw@dot.ca.gov